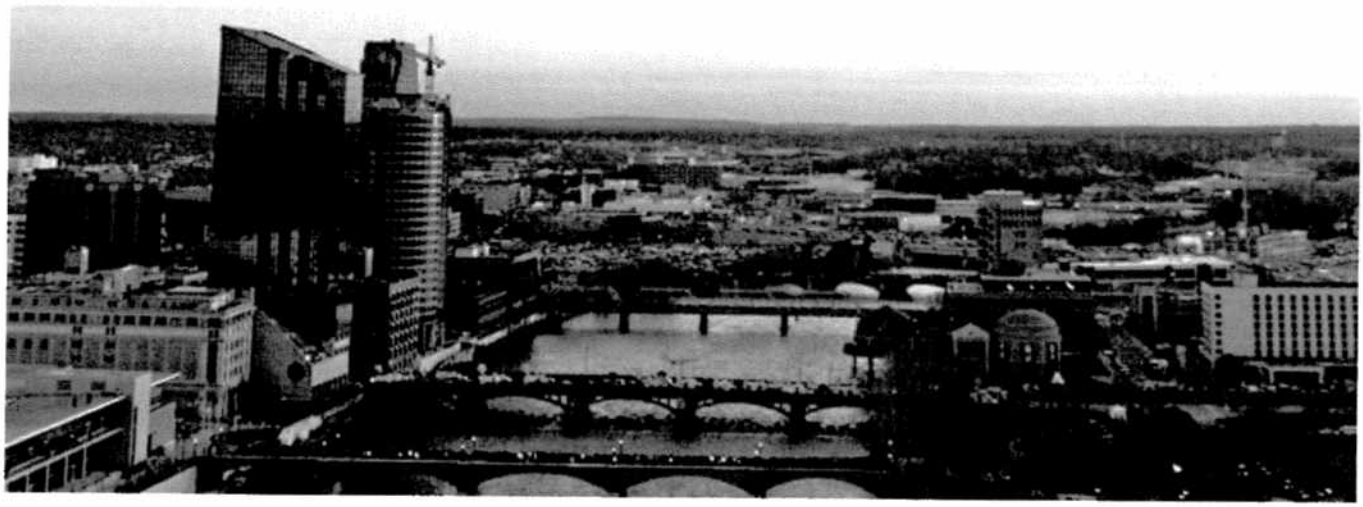
Collaborative, Regional Partnerships:

Transportation Planning in the Grand Rapids Metropolitan Area



Presented by:

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GVMC

Grand Valley Metropolitan Council

Established in 1990

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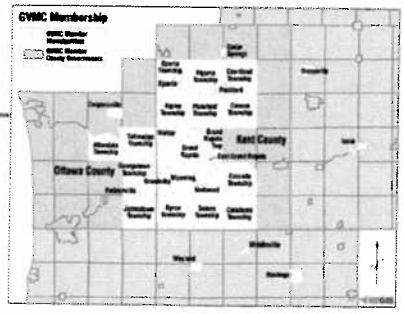
GVMC Grand Valley Metropolitan Council
Established in 1990

Collaborative Regional Partnerships:
Transportation Planning in the Grand Rapids Metropolitan Area

Grand Valley Metro Council

- Incorporated on October 1, 1990
- Began with 11 members, now 34
- Communities located in 6 counties
- Represents more than 700,000 persons
- Covers 13 State Representatives and 6 State Senate, 3 Congressional Districts
- Includes private sector representatives
- Transportation Metropolitan Planning Organization (MPO) for urbanized area

GVMC Grand Valley Metropolitan Council
Established in 1990



Grand Valley Metro Council

- Metropolitan Planning Organization (MPO): Transportation Planning
- Regional Land Use Planning: Metropolitan Development Framework
- REGIS: Regional Geographic Information System
- REPA - Regional Environmental Planning Agency: Water, Sewer, Storm Water, Watershed and Natural Resources Planning
- Green Infrastructure and Farmland Preservation
- Rogue River Watershed Agency: Combined planning within watershed
- Lower Grand River Watershed: Proposed regional umbrella organization
- Regional Cooperation Committee: Tackling tough problems in a collaborative environment
- Legislative: Direct Advocacy on State and Federal Issues

REGIS

Regional Geographic Information System

- Acronym for: "Regional Geographic Information System (GIS)"
- 22 Government and Quasi-Government Organizations
- $14 Million initial participant investment
- $1 Million annual operating budget
- A shared common network, database and suite of applications
- REGIS staff augments local ITS and GIS staff
- Board of Directors and Advisory Teams guide deployment of software and tools
- 2006 – New Director; Renewed focus on sharing GIS tools and applications to improve functionality for all users
- 2007 – New members; more advanced services

REGIONAL GEOGRAPHIC INFORMATION SYSTEM (REGIS) GIS

"One-Stop Shop" of Information

What is the geographical location and approximate size of this parcel? How much annual tax is assessed on this parcel?

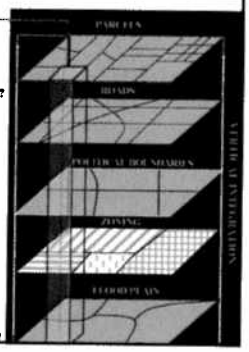
Is there any major or minor road access to this parcel?

What political boundary does this parcel belong to? Where to go to vote?

What zoning and land use codes apply to this parcel?

Which floodplain does this parcel belong to?

...more (utilities, land use, parks...)



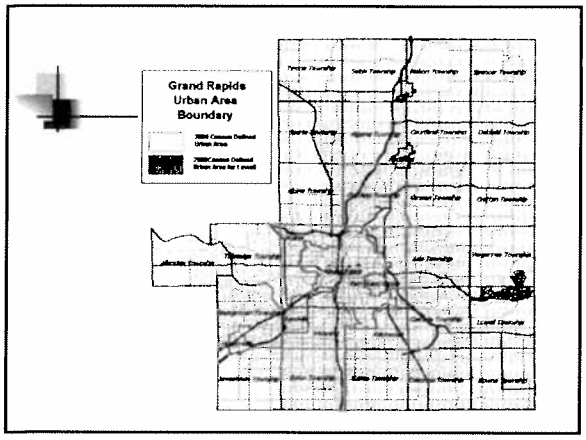
GVMC Grand Valley Metropolitan Council

Established in 1990

TRANSPORTATION PLANNING

Transportation Planning

- GVMC is the Metropolitan Planning Organization (MPO) and Transportation Management Area agency (TMA) for the Grand Rapids Metro Area
- Responsible for the development and update of the region's Transportation Improvement Program (TIP) and the Long Range Transportation Plan (LRTP).
- Two Collaborative Committees – Technical and Policy – include representatives of all MPO-member communities and entities

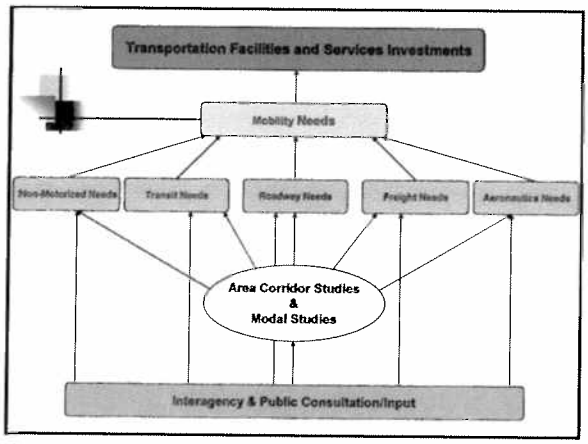


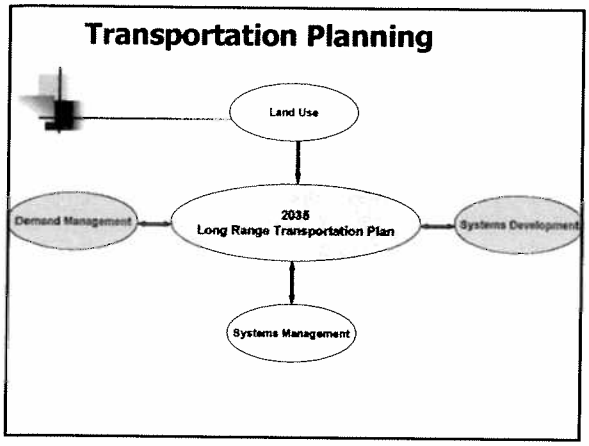
The Transportation System in Metro Grand Rapids

- Within the GVMC MPO area there are 5,300 miles of roads on the local and federal aid systems
- That includes 1,600 miles of federal aid eligible roads
- 200 miles of roads within that system are considered "Capacity deficient" according to FHWA and MDOT standards

Transportation Plan Overview

- The GVMC Transportation Plan contains Goals and Objectives for the area Transportation System.
- The Plan is a collaborative process between Federal, State, and Local Partners (32 Jurisdictions)
- The Plan addresses Transportation deficiencies and needs based on detailed analysis of data
- The Plan is multi-modal addressing all modes of transportation within the Metro Area Boundary including Aviation, Highways (state and local), Non-Motorized (walking and biking trails), Rail (Amtrak), and Transit (ITP)





Transportation Focus

- Preservation
- Congestion
- Safety
- Transit/Rail
- Non-Motorized
- ITS/Operations

Regional Collaboration: Transit Partnerships

- The Interurban Transit Partnership (ITP-The Rapid) actively participates in the GVMC MPO planning process
- ITP representatives are members of the GVMC Technical and Policy Committees, and GVMC planners participate ITP planning forums

Regional Collaboration: Transit Partnerships

- Since 2003, GVMC transportation planners have participated in ITP's long-range planning process studying bus rapid transit and streetcar connector services
- GVMC Executive Director serves on visioning and steering committee for ITP

Regional Collaboration: Gerald R. Ford Airport

- Representatives of the airport authority serve on GVMC Technical and Policy Committees
- 2007: Airport poised to join GVMC-administered regional storm water regulation compliance initiative

Transportation Funding Highlights

- In 2006, the Grand Rapids metropolitan area, through the Transportation Improvement Program (TIP), obligated over $89 million in transportation improvements.

Typical Projects

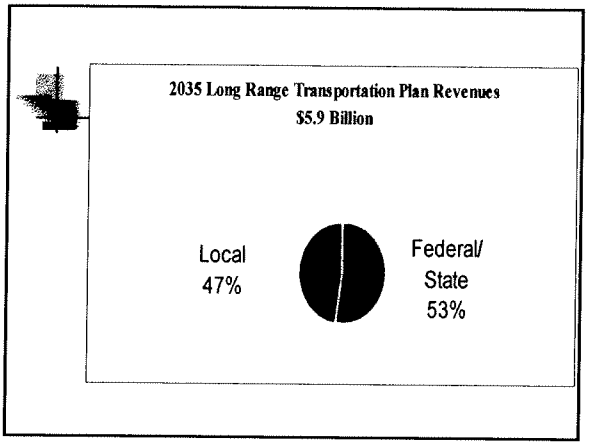
- Funded transportation improvements typically include:
  - Roadway (resurface, reconstruction)
  - Safety (intersection improvements, signals)
  - Bridge

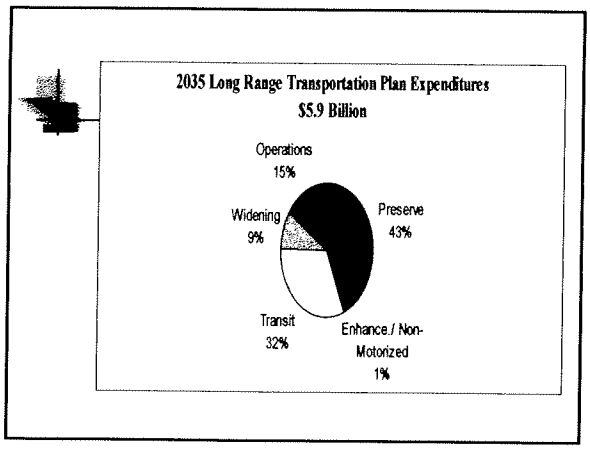
Typical Projects (cont.)

- Other transportation improvements typically funded annually include:
  - Bicycle/Pedestrian (sidewalks/trails)
  - Transit (capital/operating)

Funding Status

- **Total funding needs by year 2035**
  $8.4 Billion
- **Identified Revenue by 2035**
  $5.8 Billion
- **Unmet funding Needs**
  $2.5 Billion





Pavement Management: New Technology Improves Efficiency and Saves Money

- April, 2006: GVMC becomes first transportation planning agency in Michigan to use mobile pavement management data collection system
- Cooperative venture saves money and provides more accurate data to improve decision making

GVMC Pavement Management System

Automated Data Collection System Characteristics

- Performed by a vehicle specially equipped to produce digital downward linescan images of the pavement that reveal distresses down to 1 mm in size
- Able to collect digital photographs (straight forward and side right-of-way views) every 20 feet of the network. This allows for a wide variety of analysis from the office vs. sending staff into the field
- 5 point laser system automatically collects rutting, roughness and other pavement distresses at highway speed
- Data collected at highway speeds (up to 65 mph)
- Data processed in office on specially designed computer system
- Able to measure roadside assets (signs, guardrail, utilities, geometric configuration etc.) at sub-meter accuracy

GVMC Pavement Management System

Benefits of Automated Data Collection System

- Cost effective in the long term
- Data more flexible and accurate
- Ability to collect data for MPO members at low cost
- Ability to maintain current MPO and local systems
- Allows for consistent data collection throughout the MPO
- Increases efficiency by gathering large amount of data in short time period
- The entire 5,300 mile system could be surveyed each year.

GVMC Pavement Management System

Cost Comparison

- **Previous System Through 2005**
  - 350 Miles per season
  - $235 per mile
- **Currently**
  - Up to 5,300 miles per season
  - Less than $50 per mile
  - Projected savings to member agencies = $75,000 per year on local road system

GVMC Pavement Management System

Other Potential Uses

- Infrastructure Asset Management System
- PASER Asset Management Data Gathering
- GIS/GPS (Accuracy to sub-meter)
- Travel Times/Delay Studies
- Airport Infrastructure Assessments
- Non-motorized trail condition survey and inventory

Pavement Data Processing

GVMC Pavement Management System

Forward Camera

Linescan Camera

ROW Camera

Regional Collaboration: Intelligent Transportation Systems

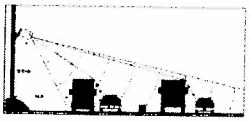
Regional Collaboration: Intelligent Transportation Systems

Intelligent Transportation Systems, or ITS is the process of integrating technology into surface transportation to help monitor and manage traffic flow, reduce congestion, provide alternate routes to travelers, enhance productivity, and save lives, time and money without adding costly additional capacity.

Regional Collaboration: Intelligent Transportation Systems

- 2007: GVMC coordinating development of a regional Intelligent Transportation System to improve safety and minimize congestion
- Leveraging of Federal funds, coupled with regional collaboration, saves money and improves efficiency

Intelligent Transportation Systems: Roadside Elements



Intelligent Transportation Systems: Deployment and Cost

- Deployment in the Grand Rapids area will begin in FY 2008
- Phase I – Cost = $10,750,000
- Funded through Federal HPPP Grant and local matching funds
- $23 Million still needed to fully build out the system

GVMC's ITS Objective: Avoid This . . .

GVMC Suggestions for Transportation Policy

- Mandate Regional Coordination: Land Use, Transportation, Water/Sewer, Schools.
- Increase Funding to adequately invest in the current and future needs of the transportation system
- Maintain a competitive bidding process
- Eliminate Demonstration Projects unless they are identified as needs in a regional transportation plan